Remarks

The above amendments remove all multiple dependencies from the claims. No new matter was added by way of this amendment.

Prompt and favorable consideration of this Amendment is respectfully requested.

Respectfully submitted,

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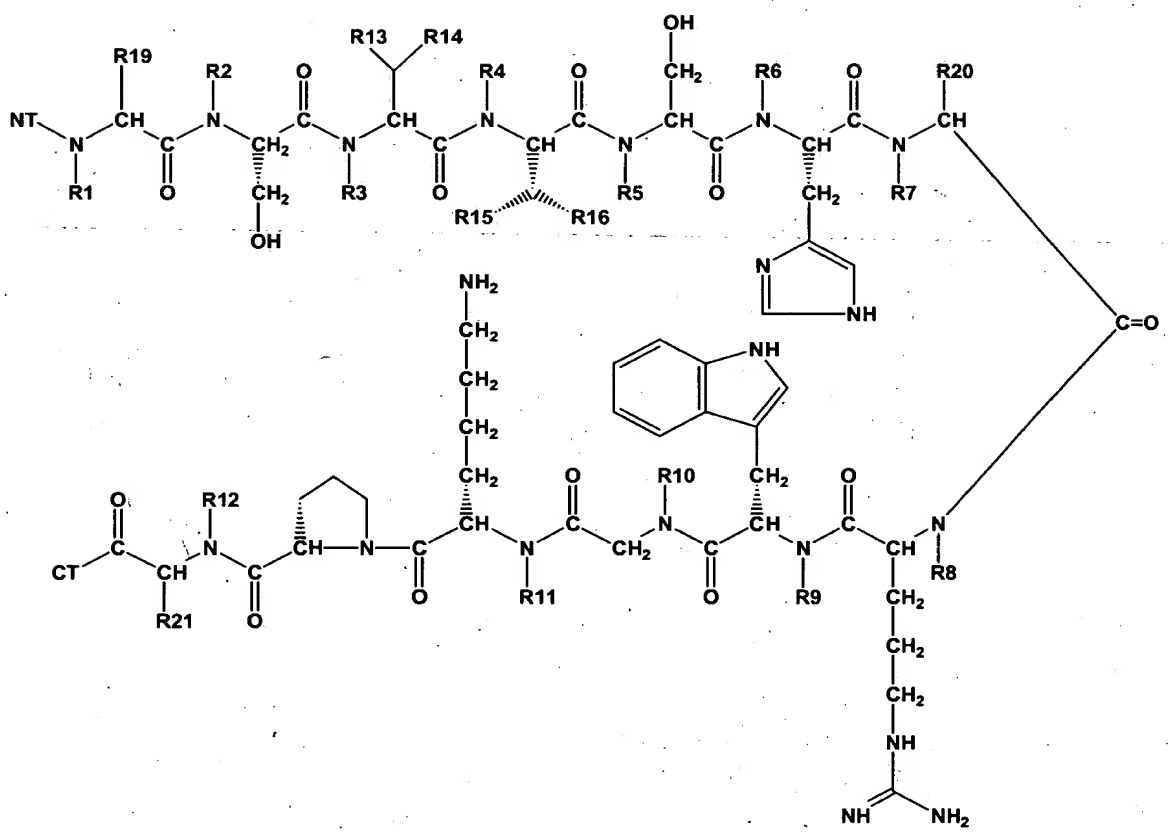
Version with markings to show changes made

Text was inserted on page 1, line 2; page 1, line 11; and page 5, line 24.

[Legend to Figures] Brief Description of the Figures

Claim 3. (amended) The compound of claim 1 [or 2], wherein one or several of the nitrogens of the peptide backbone have been exchanged for carbon substituted with hydrogen, and/or wherein one or several of the oxygens of the carbonyl groups of the peptide backbone has been exchanged for two hydrogens.

Claim 4. (amended) The compound of [any one of claims 1 to 3] claim 1, having the stereomeric conformation given in the general formula (2):



(2)

Claim 7. (amended) A compound according to [any one of claims 1-4 or 6] claim 1, wherein one or several of R1, R2, R3, R4, R5, R6, R7, R8, R9, R10, R11 and R12 are selected to be methyl, whereas the rest is selected to be hydrogen, the selections being made so as to prevent or decelerate breakdown by proteases and/or peptidases.

Claim 8. (amended) A compound according to [any one of claims 1-4 or 6] claim 1, wherein less than 6, preferably less than 5, more preferred less than 4 and preferably less than 2, and most preferred none of the R1, R2, R3, R4, R5, R6, R7, R8, R9, R10, R11 and R12 are methyl.

Claim 10. (amended) A compound comprising one of the following[s] sequences: Ser-Ser-Ile-Ile-Ser-His-dPhe-Arg-Trp-Gly-Lys-Pro-Val-NH_2 (MS-09) (SEQ ID NO:2), Tyr-Ser-Ser-Ile-Ile-Ser-His-Phe-Arg-Trp-Gly-Lys-Pro-Val-NH_2 (MS-30) (SEQ ID NO:3), Tyr-Ser-Ile-Ile-Ser-His-Phe-Arg-Trp-Gly-Lys-Pro-Val-NH_2 (MS-31) (SEQ ID NO:4), Ser-Ser-Ile-Ile-Ser-His-Phe-Arg-Trp-Gly-Lys-Pro-Val-Tyr-NH_2 (MS-32) (SEQ ID NO:5), Ser-Ile-Ile-Ser-His-Phe-Arg-Trp-Gly-Lys-Pro-Val-NH_2 (MS-33) (SEQ ID NO:6), Thr-Ser-Ile-Ile-Ser-His-Phe-Arg-Trp-Gly-Lys-Pro-Val-NH_2 (MS-34) (SEQ ID NO:7), Ser-Thr-Ile-Ile-Ser-His-Phe-Arg-Trp-GIy-Lys-Pro-Val-NH_2 (MS-35) (SEQ ID NO:8), Ser-Ser-Val-Ile-Ser-His-Phe-Arg-Trp-Gly-Lys-Pro-Val-NH_2 (MS-36) (SEQ ID NO:9), Ser-Ser-Ile-Val-Ser-His-Phe-Arg-Trp-Gly-Lys-Pro-Val-NH_2 (MS-37) (SEQ ID NO:10), Ac-Ser-Ser-Ile-Ile-Ser-His-Phe-Arg-Trp-Gly-Lys-Pro-Val-NH_2 (MS-38) (SEQ ID NO:11), dSer-Ser-Ile-Ile-Ser-His-Phe-Arg-Trp-Gly-Lys-Pro-Val-NH_2 (MS-39) (SEQ ID NO:12), NMeSer-Ser-Ile-Ile-Ser-His-Phe-Arg-Trp-Gly-Lys-Pro-Val-NH_2 (MS-40) (SEQ ID NO:13), Ser-Ser-Ile-Ile-Ser-His-Phe-Arg-Trp-Gly-Lys-Pro-NMeVal-NH_2 (MS-41) (SEQ ID NO:14) or Ser-Ser-Ile-Ile-Ser-His-NMedPhe-Arg-Trp-Gly-Lys-Pro-Val-NH_2 (MS-42) (SEQ ID NO:15).

Claim 11. (amended) A compound according to [any one of claims 1-4 or 6-8] claim 1, in which R20 is -CH_2X, wherein X is aryl, substituted aryl, heteroaryl, substituted heteroaryl, phenyl or substituted phenyl, [or a compound according to any one of claims 5, 9 or 10,] wherein the compound is capable of activating MC1-receptors.

Claim 12. (amended) A compound according to [any one of claims 1-4 or 6-8] claim 1, in which R20 is -CH_2X, wherein X is aryl, substituted aryl, heteroaryl, substituted heteroaryl,

naphthalene, or substituted naphthalene, [or a compound according to any one of claims 5, 9 or 10,] wherein the compound is capable of blocking MC1-receptors.

Claim 13. (amended) A compound according to [any one of claims 1-12] claim 1 which inhibits NO (nitric oxide) production, or the formation of nitrite.

Claim 14. (amended) A compound according to [any one of claims 1-12] claim 1 which is immunomodulatory.

Claim 15. (amended) A compound according to [any one of claims 1-12] claim 1 which ameliorates, prevents or inhibits contact hypersensitivity.

Claim 16. (amended) A compound according to [any one of claims 1-12] claim 1 which inhibits sensitization by a hapten, a preferred hapten being 2,4-dinitrofluorobenzene (DNFB).

Claim 17. (amended) A compound according to [any one of claims 1-12] claim 1 which has an effect on induction of hapten tolerance, a preferred hapten being 2,4-dinitrofluorobenzene (DNFB).

Claim 18. (amended) A compound according to [any one of claims 1-12] claim 1 which ameliorates, prevents or inhibits formation of oedema, in particular oedema associated with allergic reactions or inflammation.

Claim 19. (amended) A compound according to [any one of claims 1-12] claim 1 which ameliorates, prevents or inhibits inflammation of blood vesseles or vasculitis.

Claim 20. (amended) A compound according to [any one of claims 1-12] claim 1 which normalizes blood cell counts, said blood cell counts prior to administration of the compound deviating from the normal.

Claim 21. (amended) A compound according to [any one of claims 1-20] claim 1, wherein the compound is capable of decreasing the formation of interleukin 1 (IL-1), interleukin 6 (IL-6), and/or tumour necrosis factor α (TNF-α), to afford decreased production of nitric oxide and/or to downregulate the activity of nitric oxide synthase (NOS).

Claim 22. (amended) A compound according to [any one of claims 1-21] claim 1, wherein the compound is capable of stimulating the production of interleukin 8 (IL-8) and/or interleukin 10 (IL-10).

Claim 23. (amended) A compound according to [any one of claims 1-22] claim 1, modified by exchanging carbon, nitrogen and oxygen atoms by other atom(s), preferably oxygen, carbon and hydrogen, respectively, so as to prevent or decelerate breakdown by proteases and/or peptidases.

Claim 24. (amended) An acid salt of [any one of the compounds of claims 1-23] the compound of claim 1.

Claim 25. (amended) A DNA molecule encoding a compound according to [any one of claims 1, 2, 4, 5, 9 or 10] claim 1.

Claim 26. (amended) A vector comprising a DNA sequence encoding a compound according to [any one of claims 1, 2, 4, 5, 9 or 10] claim 1.

Claim 27. (amended) A fusion protein comprising one or several copies of the sequence of a compound according to [any one of claims 1, 2, 4, 5, 9 or 10] claim 1.

Claim 29. (amended) A pro-drug which upon administration to an animal or human is converted to or leads to the formation of a compound according to [any of claims 1-24 or to the fusion protein of claim 27] claim 1.

Claim 30. (amended) A pharmaceutical composition comprising a compound according to [any one of claims 1-24, or the DNA of claim 25, or the vector of claim 26 or 28, or the fusion protein of claim 27 or the pro-drug of claim 29,] claim 1, or a DNA molecule coding therefor, or a vector comprising the DNA molecule, or a fusion protein comprising one or several copies of the compound of claim 1, or a pro-drug which is converted upon administration to a compound of claim 1 or a fusion protein thereof, together with a pharmaceutically acceptable carrier.

Claim 31. (amended) A method [The use of a compound according to any one of claims 1-24, or the pro-drug of claim 29, or the pharmaceutical of claim 30,] for inhibition of the formation of NO (nitric oxide), and/or for the inhibition of the formation of nitrite comprising administering

to a patient or healthy individual the compound according to claim 1, or a DNA molecule coding therefor, or a vector comprising the DNA molecule, or a fusion protein comprising one or several copies of the compound of claim 1, or a pro-drug which is converted upon administration to a compound of claim 1 or a fusion protein thereof.

Claim 32. (amended) A method [The use of a compound according to any one of claims 1-24, or the pro-drug of claim 29, or the pharmaceutical of claim 30,] for immunomodulation comprising administering to a patient or healthy individual the compound according to claim 1, or a DNA molecule coding therefor, or a vector comprising the DNA molecule, or a fusion protein comprising one or several copies of the compound of claim 1, or a pro-drug which is converted upon administration to a compound of claim 1 or a fusion protein thereof.

Claim 33. (amended) A method [The use of a compound according to any one of claims 1-24, or the pro-drug of claim 29, or the pharmaceutical of claim 30,] for amelioration, prevention and/or inhibition of contact hypersensitivity comprising administering to a patient or healthy individual the compound according to claim 1, or a DNA molecule coding therefor, or a vector comprising the DNA molecule, or a fusion protein comprising one or several copies of the compound of claim 1, or a pro-drug which is converted upon administration to a compound of claim 1 or a fusion protein thereof.

Claim 34. (amended) A method [The use of a compound according to any of claims 1-24, or the pro-drug of claim 29, or the pharmaceutical of claim 30,] for inhibition and/or prevention of the sensitization by a hapten, the preferred hapten being 2,4-dinitrofluorobenzene (DNFB)

comprising administering to a patient or healthy individual the compound according to claim 1, or a DNA molecule coding therefor, or a vector comprising the DNA molecule, or a fusion protein comprising one or several copies of the compound of claim 1, or a pro-drug which is converted upon administration to a compound of claim 1 or a fusion protein thereof.

Claim 35. (amended) A method [The use of a compound according to any one of claims 1-24, or the pro-drug of claim 29, or the pharmaceutical of claim 30,] for affecting the induction of hapten tolerance, the preferred hapten being 2,4-dinitrofluorobenzene (DNFB) comprising administering to a patient or healthy individual the compound according to claim 1, or a DNA molecule coding therefor, or a vector comprising the DNA molecule, or a fusion protein comprising one or several copies of the compound of claim 1, or a pro-drug which is converted upon administration to a compound of claim 1 or a fusion protein thereof.

Claim 36. (amended) A method [The use of a compound according to any one of claims 1-24, or the pro-drug of claim 29, or the pharmaceutical of claim 30,] for amelioration, prevention and/or inhibition of formation of oedema, in particular oedema associated with allergic reactions or inflammation comprising administering to a patient or healthy individual the compound according to claim 1, or a DNA molecule coding therefor, or a vector comprising the DNA molecule, or a fusion protein comprising one or several copies of the compound of claim 1, or a pro-drug which is converted upon administration to a compound of claim 1 or a fusion protein thereof.

Claim 37. (amended) A method [The use of compound according to any one of claims 1-24, or the pro-drug of claim 29, or the pharmaceutical of claim 30,] for amelioration, prevention

and/or inhibition of inflammation of blood vessels or vasculitis comprising administering to a patient or healthy individual the compound according to claim 1, or a DNA molecule coding therefor, or a vector comprising the DNA molecule, or a fusion protein comprising one or several copies of the compound of claim 1, or a pro-drug which is converted upon administration to a compound of claim 1 or a fusion protein thereof.

Claim 38. (amended) A method [The use of a compound according to any one of claims 1-24, or the pro-drug of claim 29, or the pharmaceutical of claim 30,] for normalization of white blood cell counts, said blood cell counts prior to administration of the compound deviating from the normal comprising administering to a patient or healthy individual the compound according to claim 1, or a DNA molecule coding therefor, or a vector comprising the DNA molecule, or a fusion protein comprising one or several copies of the compound of claim 1, or a pro-drug which is converted upon administration to a compound of claim 1 or a fusion protein thereof.

Claim 39. (amended) A method [The use of a compound according to any one of claims 1-24, or the pro-drug of claim 29, or the pharmaceutical of claim 30,] for stimulation of cAMP comprising administering to a patient or healthy individual the compound according to claim 1, or a DNA molecule coding therefor, or a vector comprising the DNA molecule, or a fusion protein comprising one or several copies of the compound of claim 1, or a pro-drug which is converted upon administration to a compound of claim 1 or a fusion protein thereof.

Claim 40. (amended) A method for treating a disease comprising inflammation or an inflammatory like condition comprising the administration of a pharmacologically effective amount of a compound according to [any one of claims 1-24] claim 1 to a patient or a healthy individual.

Claim 41. (amended) A method for treating a disease or condition caused by or associated with one or more of the following: allergy, hypersensitivity, bacterial infection, viral infection, inflammation caused by toxic agent, fever, autoimmune disease, radiation damage by any source including UV-radiation, X-ray radiation, γ-radiation, α- or β-particles, sun burns, elevated temperature, mechanical injury and hypoxia, the method comprising the administration of a pharmacologically effective amount of a compound according to [any one of claims 1-24] claim 1 to a patient or a healthy individual.

Claim 42. (amended) A method for treating an inflammatory disease of the skin (including the dermis and epidermis) of any origin, such as skin diseases having a inflammatory component, in particular contact dermatitis of the skin, sunburns of the skin, burns of any cause, inflammation of the skin caused by chemical agent, psoriasis, vasculitis, pyoderma gangrenosum, discoid lupus erythematosus, eczema, pustulosis palmo-plantaris, and phemphigus vulgaris, the method comprising the administration of a pharmacologically effective amount of a compound according to [any one of claims 1-24] claim 1 to a patient or a healthy individual.

Claim 43. (amended) A method for treating an inflammatory disease in the abdomen, including an abdominal disease having an inflammatory component, such as gastritis, including one of unknown origin, gastritis perniciosa (atrophic gastritis), ulcerous colitis (colitis ulcerosa), morbus

Crohn, systemic sclerosis, ulcus duodeni, celiac disease, oesophagitis and ulcus ventriculi, the method comprising the administration of a pharmacologically effective amount of a compound according to [any one of claims 1-24] claim 1 to a patient or a healthy individual.

Claim 44. (amended) A method for treating a disease or condition that requires immunomodulatory treatment or a disease or condition which is a systemic or general and/or local immunological disease or condition, such as one of an autoimmune nature, and other inflammatory disease of a general nature, in particular rheumatoid arthritis, psoriatic arthritis, systemic sclerosis, polymyalgia rheumatica, Wegener's granulomatosis, sarcoidosis, eosinophilic fasceitis, reactive arthritis, Bechterew's disease, systemic lupus erythematosus, arteritis temporalis, Behcet's disease, morbus Burger, Good Pastures' syndrome, eosinophilic granuloma, fibromyalgia, myositis, and mixed connective tissue disease, the method comprising the administration of a pharmacologically effective amount of a compound according to [any one of claims 1-24] claim 1 to a patient or a healthy individual.

Claim 45. (amended) A method for treating a disease or condition of the peripheral and central nervous system related to inflammation, such as cerebral vasculitis, multiple sclerosis, autoimmune ophtalmitis and polyneuropathia, the method comprising the administration of a pharmacologically effective amount of a compound according to [any one of claims 1-24] claim 1 to a patient or a healthy individual.

Claim 46. (amended) A method for treating a disease or condition of the eye and tear glands related to inflammation, such as anterior and posterior uveitis, retinal vasculitis, [otpicus]

opticus neuritis, Wegener's granulomatosis, Sjögren's syndrome, episcleritis, scleritis, sarcoidosis affecting the eye and polychondritis affecting the eye, the method comprising the administration of a pharmacologically effective amount of a compound according to [any one of claims 1-24] claim 1 to a patient or a healthy individual.

Claim 47. (amended) A method for treating a disease or condition of the ear related to inflammation, such as polychondritis affecting the ear and external otitis, the method comprising the administration of a pharmacologically effective amount of a compound according to [any one of claims 1-24] claim 1 to a patient or a healthy individual.

Claim 48. (amended) A method for treating a disease or condition of the nose related to inflammation, such as sarcoidosis, polychondritis and mid-line granuloma of the nose, the method comprising the administration of a pharmacologically effective amount of a compound according to [any one of claims 1-24] claim 1 to a patient or a healthy individual.

Claim 49. (amended) A method for treating a disease or condition related to inflammation of the mouth, pharynx and salivary gland, such as Wegener's granulomatosis, mid-line granuloma, Sjögren's syndrome and polychondritis in these areas, the method comprising the administration of a pharmacologically effective amount of a compound according to [any one of claims 1-24] claim 1 to a patient or a healthy individual.

Claim 50. (amended) A method for treating a disease or condition related to inflammation in the lung, such as idiopathic alveolitis, primary pulmonary hypertension, bronchitis, chronic

bronchitis, sarcoidosis, alveolitis in inflammatory systemic disease, pulmonary hypertension in inflammatory systemic disease, Wegener's granulomatosis and Good Pastures' syndrome, the method comprising the administration of a pharmacologically effective amount of a compound according to [any one of claims 1-24] claim 1 to a patient or a healthy individual.

Claim 51. (amended) A method for treating a disease or condition related to the inflammation of the heart, such as pericarditis, idiopathic pericarditis, myocarditis, Takayasus' arteritis, Kawasaki's disease, coronary artery vasculitis, pericarditis in inflammatory systemic disease, myocarditis in inflammatory systemic disease, endocarditis and endocarditis in inflammatory systemic disease, the method comprising the administration of a pharmacologically effective amount of a compound according to [any one of claims 1-24] claim 1 to a patient or a healthy individual.

Claim 52. (amended) A method for treating a disease or condition related to inflammation of the liver, such as hepatitis, chronic active hepatitis, biliary cirrhosis, hepatic damage by toxic agent, interferon induced hepatitis, hepatitis induced by viral infection, liver damage induced by anoxia and liver damage caused by mechanical trauma, the method comprising the administration of a pharmacologically effective amount of a compound according to [any one of claims 1-24] claim 1 to a patient or a healthy individual.

Claim 53. (amended) A method for treating a disease or condition related to inflammation of the endocrine or exocrine pancreas, such as of diabetes mellitus including its prevention and late complications, acute pancreatitis and chronic pancreatitis, the method comprising the administration

of a pharmacologically effective amount of a compound according to [any one of claims 1-24] claim 1 to a patient or a healthy individual.

Claim 54. (amended) A method for treating a disease or condition related to the inflammation of the thyroidea, such as thyreoiditis, autoimmune thyreoiditis, Hashimoto's thyreoiditis, the method comprising the administration of a pharmacologically effective amount of a compound according to [any one of claims 1-24] claim 1 to a patient or a healthy individual.

Claim 55. (amended) A method for treating a disease or condition related to inflammation of the kidney, such as glomerulonephritis, glomerulonephritis in systemic lupus erythematosus, periarteritis nodosa, Wegener's granulomatosis, Good-Pastures' syndrome, HLAb27 associated diseases, IgA nephritis (IgA = Immunoglobuline A), pyelonephritis, chronic pyelonephritis and interstitial nephritis, the method comprising the administration of a pharmacologically effective amount of a compound according to [any one of claims 1-24] claim 1 to a patient or a healthy individual.

Claim 56. (amended) A method for treating a disease or condition related to the inflammation of the joints such as Bechterew's disease, psoriatic arthritis, rheumatoid arthritis, arthritis in colitis ulcerosa, arthritis in morbus Crohn, affection of joints in systemic lupus erythematosus, systemic sclerosis, mixed connective tissue disease, reactive arthritis, Reiter's syndrome, arthrosis of any joint, in particular arthrosis of finger joints, the knee and the hip, the method comprising the administration of a pharmacologically effective amount of a compound according to [any one of claims 1-24] claim 1 to a patient or a healthy individual.

Claim 57. (amended) A method for treating a disease or condition related to the inflammation of blood vessels, such as arteritis temporalis, periarteritis nodosa, arteriosclerosis, Takayasus' arteritis and Kawasaki's disease, the method comprising the administration of a pharmacologically effective amount of a compound according to [any one of claims 1-24] claim 1 to a patient or a healthy individual.

Claim 58. (amended) A method for affording protection against and prevention of arteriosclerosis, the method comprising the administration of a pharmacologically effective amount of a compound according to [any one of claims 1-24] claim 1 to a patient or a healthy individual.

Claim 59. (amended) A method for treatment of drug induced disorders of the blood and lymphoid system, such as drug induced hypersensitivity (including drug hypersensitivity) affecting blood cells and blood cell forming organs (e.g. bone marrow and lymphoid tissue), in particular anaemia, granulocytopenia, trombocytopenia, leukopenia, aplastic anaemia, autoimmune haemolytic anaemia, autoimmune thrombocytopenia, autoimmune granulocytopenia, the method comprising the administration of a pharmacologically effective amount of a compound according to [any one of claims 1-24] claim 1 to a patient or a healthy individual.

Claim 60. (amended) A method for treating a disease or condition related to fast allergic disorders (Type I allergy) such as anaphylactic reactions, anaphylactoid reactions, asthma, asthma of allergic type, asthma of unknown origin, rhinitis, hay fever and pollen allergy, the method comprising the administration of a pharmacologically effective amount of a compound according to [any one of claims 1-24] claim 1 to a patient or a healthy individual.

Claim 61. (amended) A method for treating a disease or condition related to infections of any origin, preferably treatment of inflammation secondary to infection caused by virus, bacteria, helminths and protozoae, the method comprising the administration of a pharmacologically effective amount of a compound according to [any one of claims 1-24] claim 1 to a patient or a healthy individual.

Claim 62. (amended) A method for treating a disease or condition related to trauma and tissue injury of any origin, the method comprising the administration of a pharmacologically effective amount of a compound according to [any one of claims 1-24] claim 1 to a patient or a healthy individual.

Claim 63. (amended) A method for stimulating pigment formation in epidermal cells, such as skin tanning for cosmetic reasons, for treatment of vitiligo, or any other condition where darkening of skin color is desired, the method comprising the administration of a pharmacologically effective amount of a compound according to [any one of claims 1-24] claim 1 to a patient or a healthy individual.

Claim 64. (amended) A method for inhibiting pigment formation in cells of the skin, the method comprising the administration of a pharmacologically effective amount of a compound according to [any one of claims 1-24] claim 1 to a patient or a healthy individual.